



November 24, 2009

Ms. Gail Mitchell, Deputy Director
Clean Water Enforcement Branch
Water Protection Division
U.S. Environmental Protection Agency, Region 4
61 Forsyth Street, SW
Atlanta, GA 30303-8960

Re: Private Drinking Water Well Survey Results

Dear Ms. Mitchell,

In accordance with the Information Request pursuant to Section 308 of the Clean Water Act dated October 6, 2009, Dalton Utilities is submitting the final analytical results received for the Private Drinking Water Well Survey. The results are contained in Attachment A which is provided herein as bound reports titled Test America Laboratories, Inc. Analytical Report on Perfluorocarbon (PFC) Analysis Lot # D9J030133 which contains 555 pages. This is the last analytical report to be submitted for the Private Drinking Water Well Survey.

If you have any questions, please contact me at 706-529-1091 or dcope@dutil.com.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false

information, including the possibility of fine and imprisonment for knowing violations.

Sincerely,



Don Cope
President & CEO

Attachment

- c: Mr. Allen Barnes, Georgia Environmental Protection Division (cover letter only)
Dr. Marlin Gottschalk, Sustainability Division Georgia Department of Natural Resources (cover letter only)
Dr. Bert Langley, Georgia Environmental Protection Division (cover letter only)
Lee A. DeHihns, Esq.
-



Case Narrative

D9J030133

TestAmerica Denver utilizes USEPA approved methods in all analytical work. The samples presented in this report were analyzed for the parameters listed on the methods summary page in accordance with the methods indicated. Dilution factors and footnotes are provided on each datasheet to assist in the interpretation of the results.

The results relate only to the samples in this report and meet all requirements of NELAC. All data have been reviewed for compliance with the laboratory QA/QC plan and have found to be compliant with laboratory protocols with any exceptions noted below.

Please note that Non-Detect (ND) results have been evaluated down to the Method Detection Limit (MDL) and should be considered ND at the MDL. Unless otherwise noted, results for solids have been dry weight corrected.

This report shall not be reproduced except in full, without the written approval of the laboratory.

Sample Arrival and Receipt

The following report contains the analytical results for four water samples received at TestAmerica Denver on October 3, 2009, according to documented sample acceptance procedures. The samples were received in good condition at a temperature of 3.1°C. No anomalies were encountered during sample receipt.

Standards

Analytical standards were prepared using commercially available certified solutions containing all compounds of interest.

The mass labeled compounds 13C4 PFBA, 13C2 PFHxA, 18O2 PFHxS, 13C4 PFOA, 13C4 PFOS, 13C5 PFNA, 13C2 PFDA, 13C2 PFUnA, 13C2 PFDoA, and D3 MeFOSA were introduced at the extraction step and were used for internal standards for the quantitation of the target compounds.

Sample Extraction and Analysis

The samples presented in this report were extracted for the target analytes by TestAmerica Denver's Standard Operating Procedure (SOP) DV-OP-0019 and analyzed for the target analytes by TestAmerica Denver's SOP DV-LC-0012.

Method QC Samples

The Method Blank is processed reagent water spiked with internal standard and prepared with each batch of 20 samples of the same matrix. The method blanks were non-detect at the reporting limits for the target analytes.

Each batch is prepared with low and mid level Laboratory Control Samples (LCS). The LCS recoveries for both levels were within established control limits, with the exception of the items noted in section Analytical Comments.

Analytical Comments

The Standard Operating Procedure (SOP) was altered slightly in the sample preparation for FOSA. Sodium hydroxide was added to all nineteen samples to obtain a pH of 14 instead of the SOP required <2. Also, a Strata-XL 100u Polymeric Reversed Phase cartridge was used for the extraction. The basic pH and Strata-XL cartridge are generating better internal standard recoveries for MeFOSA.

Due to low internal standard recoveries in the samples and in the QC associated with PFC batch 9278425, samples #113 210 Mansfield Rd, #114 1257 Sane Rd, and DUP #6 were re-extracted out of the laboratory prescribed hold time and reanalyzed in PFC QC batch 9295582. Both batches are included in this report. Please note the sample results should be considered estimated.

Due to low internal standard recoveries in the samples and/or in the QC associated with FOSA batch 9297461, samples #113 210 Mansfield Rd, #114 1257 Sane Rd, DUP #5, and DUP #6 were re-extracted out of the laboratory prescribed hold time and reanalyzed in PFC QC batch 9295579. Both batches are included in this report. Please note the sample results should be considered estimated.

The internal standard recoveries for 13C2 PFUnA and 13C2 PFDoA associated with PFC QC batch 9278425 were recovered below 50% in sample #113 210 Mansfield Rd. The internal standard recovery for 13C2 PFUnA associated with PFC QC batch 9278425 was recovered below 50% in sample DUP #6. Upon re-extraction and reanalysis in QC batch 9295582, the internal standard recoveries were 100% in control. Both the original and reanalysis data have been provided, as re-extraction was unavoidably performed outside the laboratory recommended sample holding time.

The internal standard recovery for 13C2 PFUnA associated with PFC QC batch 9278425 was recovered below 50% in sample #114 1257 Sane Rd. Upon re-extraction and reanalysis in PFC QC batch 9295582, an internal standard outlier was still present, demonstrating this anomaly is most likely due to matrix interference. Both the original and reanalysis data have been provided, as re-extraction was unavoidably performed outside the laboratory recommended sample holding time.

The internal standard recoveries for MeFOSA associated with PFC QC batch 9279461 recovered below 50% in samples #114 1257 Sane Rd, DUP #5, and DUP #6. Upon re-extraction and reanalysis in QC batch 9295579, the internal standard recoveries were 100% in control. Both the original and reanalysis data have been provided, as re-extraction was unavoidably performed outside the laboratory recommended sample holding time.

The PFC Method Blank, low-level LCS, and mid-level LCS/LCSD analyses associated with QC batch 9278425 exhibited internal standard recoveries outside the QC control limits for 13C2 PFUnA and/or 13C2 PFDoA. Upon re-extraction and reanalysis in QC batch 9295582, the internal standard recoveries were 100% in control. Both the original and reanalysis data have been provided, as re-extraction was unavoidably performed outside the laboratory recommended sample holding time.

The PFC low-level LCS analysis associated with QC batch 9278425 exhibited a percent recovery outside the control limits for Perfluorodecane sulfonate (PFDS). Upon re-extraction and reanalysis in QC batch 9295582, the PFDS recovery was 100% in control. However, Perfluorooctanesulfonate (PFOS) was recovered outside the control limits. Both the original and reanalysis data have been provided, as re-extraction was unavoidably performed outside the laboratory recommended sample holding time. Please note PFDS is not a target compound for this project.

Due to a limitation in the LIMS system, the PFC low-level LCS associated with QC batch 9278425 reported the percent recovery for Perfluorotridecanoic Acid (PFTriA) as 0.0%. PFTriA was recovered within the control limits (50-150%) at 60%. As the compound was detected

Lot #: D9J030133

below the Method Detection Limit (MDL) of 0.020 ug/L, the system reports the percent recoveries as 0.0%.

The FOSA low-level LCS analysis associated with QC batch 9279461 exhibited internal standard recoveries outside the QC control limits for MeFOSA. Upon re-extraction and reanalysis in QC batch 9295579, the internal standard recoveries were 100% in control. Both the original and reanalysis data have been provided, as re-extraction was unavoidably performed outside the laboratory recommended sample holding time.

The method required MS/MSD could not be performed for QC batches 9278425, 9295582, 9279461, and 9295579, due to insufficient sample volume. Method precision and accuracy have been verified by the acceptable low-level LCS and mid-level LCS/LCSD analyses data.

No other anomalies were observed.

EXECUTIVE SUMMARY - Detection Highlights

D9J030133

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>ANALYTICAL</u> <u>METHOD</u>
NO DETECTABLE PARAMETERS				

METHODS SUMMARY

D9J030133

<u>PARAMETER</u>	<u>ANALYTICAL METHOD</u>	<u>PREPARATION METHOD</u>
LC/MS/MS PFCs	DEN -LC-0012	SW846 FOSA spec

References:

DEN Severn Trent Laboratores, Denver, Facility Standard
Operating Procedure.

METHOD / ANALYST SUMMARY

D9J030133

<u>ANALYTICAL METHOD</u>	<u>ANALYST</u>	<u>ANALYST ID</u>
DEN -LC-0012	Jacqueline Bonnett	003601

References:

DEN Severn Trent Laboratores, Denver, Facility Standard
Operating Procedure.

SAMPLE SUMMARY

D9J030133

WO #	SAMPLE#	CLIENT	SAMPLE ID	SAMPLED DATE	SAMP TIME
LL0DP	001	#113		09/29/09	09:45
LL0DR	002	#114		09/29/09	10:42
LL0D1	003	DUP	#5	09/29/09	
LL0D3	004	DUP	#6	09/29/09	Ex 6

NOTE(S) :

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

Dalton Utilities

Client Sample ID: #113 210 MANSFIELD RD

HPLC

Lot-Sample #....: D9J030133-001 Work Order #....: LL0DP1AA Matrix.....: WATER
 Date Sampled....: 09/29/09 09:45 Date Received...: 10/03/09
 Prep Date.....: 10/05/09 Analysis Date...: 10/17/09
 Prep Batch #....: 9278425 Analysis Time...: 04:05
 Dilution Factor: 1

Method.....: DEN -LC-0012

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perfluorooctanoic Acid	ND	0.020	ug/L	0.0098
Perfluorooctanesulfonate	ND	0.020	ug/L	0.013
Perfluorobutanoic acid (PFBA)	ND	0.020	ug/L	0.0098
Perfluoropentanoic acid (PFPA)	ND	0.030	ug/L	0.011
Perfluorohexanoic acid (PFHxA)	ND	0.020	ug/L	0.0029
Perfluoroheptanoic acid (PFHpA)	ND	0.020	ug/L	0.013
Perfluorononanoic acid (PFNA)	ND	0.020	ug/L	0.017
Perfluorodecanoic acid (PFDA)	ND	0.020	ug/L	0.0078
Perfluoroundecanoic acid (PFUnA)	ND	0.020	ug/L	0.0069
Perfluorododecanoic acid (PFDoA)	ND	0.020	ug/L	0.015
Perfluorotridecanoic acid (PFTriA)	ND	0.020	ug/L	0.018
Perfluorotetradecanoic acid (PFTeA)	ND	0.020	ug/L	0.015
Perfluorobutane sulfonate (PFBS)	ND	0.020	ug/L	0.0082
Perfluorohexane sulfonate (PFHxS)	ND	0.030	ug/L	0.0070

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
13C4 PFOA	129	(50 - 200)
13C4 PFOS	78	(50 - 200)
13C4 PFBA	106	(50 - 200)
13C2 PFHxA	105	(50 - 200)
18O2 PFHxS	126	(50 - 200)
13C5 PFNA	93	(50 - 200)
13C2 PFDA	60	(50 - 200)
13C2 PFUnA	48 *	(50 - 200)
13C2 PFDoA	47 *	(50 - 200)

NOTE(S):

* Surrogate recovery is outside stated control limits.

Dalton Utilities

Client Sample ID: #113 210 MANSFIELD RD

HPLC

Lot-Sample #....: D9J030133-001 Work Order #....: LL0DP1AC Matrix.....: WATER
Date Sampled....: 09/29/09 09:45 Date Received...: 10/03/09
Prep Date.....: 10/06/09 Analysis Date...: 10/17/09
Prep Batch #....: 9279461 Analysis Time...: 17:46
Dilution Factor: 1
Method.....: DEN -LC-0012

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>MDL</u>
Perfluorooctane sulfonamide (F OSA)	ND	0.050	ug/L	0.0057

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
MeFOSA	67	(50 - 200)

Dalton Utilities

Client Sample ID: #113 210 MANSFIELD RD

HPLC

Lot-Sample #....: D9J030133-001 Work Order #....: LL0DP2AA Matrix.....: WATER
 Date Sampled....: 09/29/09 09:45 Date Received...: 10/03/09
 Prep Date.....: 10/22/09 Analysis Date...: 11/05/09
 Prep Batch #....: 9295582 Analysis Time...: 13:34
 Dilution Factor: 1

Method.....: DEN -LC-0012

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Perfluorooctanoic Acid	ND	0.020	ug/L	0.0098
Perfluorooctanesulfonate	ND	0.020	ug/L	0.013
Perfluorobutanoic acid (PFBA)	ND	0.020	ug/L	0.0098
Perfluoropentanoic acid (PFPA)	ND	0.030	ug/L	0.011
Perfluorohexanoic acid (PFHxA)	ND	0.020	ug/L	0.0029
Perfluoroheptanoic acid (PFHpA)	ND	0.020	ug/L	0.013
)				
Perfluorononanoic acid (PFNA)	ND	0.020	ug/L	0.017
Perfluorodecanoic acid (PFDA)	ND	0.020	ug/L	0.0078
Perfluoroundecanoic acid (PFUnA)	ND	0.020	ug/L	0.0069
A)				
Perfluorododecanoic acid (PFDoA)	ND	0.020	ug/L	0.015
A)				
Perfluorotridecanoic acid (PFTriA)	ND	0.020	ug/L	0.018
Perfluorotetradecanoic acid (PFTeA)	ND	0.020	ug/L	0.015
Perfluorobutane sulfonate (PFBS)	ND	0.020	ug/L	0.0082
Perfluorohexane sulfonate (PFHxS)	ND	0.030	ug/L	0.0070

SURROGATE	PERCENT RECOVERY	RECOVERY	
		LIMITS	
13C4 PFOA	162	(50 - 200)	
13C4 PFOS	68	(50 - 200)	
13C4 PFBA	98	(50 - 200)	
13C2 PFHxA	129	(50 - 200)	
18O2 PFHxS	78	(50 - 200)	
13C5 PFNA	81	(50 - 200)	
13C2 PFDA	69	(50 - 200)	
13C2 PFUnA	68	(50 - 200)	
13C2 PFDoA	58	(50 - 200)	

Dalton Utilities

Client Sample ID: #113 210 MANSFIELD RD

HPLC

Lot-Sample #....: D9J030133-001 Work Order #....: LL0DP2AC Matrix.....: WATER
Date Sampled....: 09/29/09 09:45 Date Received...: 10/03/09
Prep Date.....: 10/22/09 Analysis Date...: 11/01/09
Prep Batch #....: 9295579 Analysis Time...: 07:26
Dilution Factor: 1
Method.....: DEN -LC-0012

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>MDL</u>
Perfluorooctane sulfonamide (F OSA)	ND	0.050	ug/L	0.0057

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
MeFOSA	78	(50 - 200)

Dalton Utilities

Client Sample ID: #114 1257 SANE RD

HPLC

Lot-Sample #....: D9J030133-002 **Work Order #....:** LL0DR1AA **Matrix.....:** WATER
Date Sampled....: 09/29/09 10:42 **Date Received...:** 10/03/09
Prep Date.....: 10/05/09 **Analysis Date...:** 10/17/09
Prep Batch #....: 9278425 **Analysis Time...:** 04:21
Dilution Factor: 1
Method.....: DEN -LC-0012

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perfluorooctanoic Acid	ND	0.020	ug/L	0.0098
Perfluorooctanesulfonate	ND	0.020	ug/L	0.013
Perfluorobutanoic acid (PFBA)	ND	0.020	ug/L	0.0098
Perfluoropentanoic acid (PFPA)	ND	0.030	ug/L	0.011
Perfluorohexanoic acid (PFHxA)	ND	0.020	ug/L	0.0029
Perfluoroheptanoic acid (PFHpA)	ND	0.020	ug/L	0.013
)				
Perfluorononanoic acid (PFNA)	ND	0.020	ug/L	0.017
Perfluorodecanoic acid (PFDA)	ND	0.020	ug/L	0.0078
Perfluoroundecanoic acid (PFUnA)	ND	0.020	ug/L	0.0069
A)				
Perfluorododecanoic acid (PFDoA)	ND	0.020	ug/L	0.015
A)				
Perfluorotridecanoic acid (PFTriA)	ND	0.020	ug/L	0.018
Perfluorotetradecanoic acid (PFTeA)	ND	0.020	ug/L	0.015
Perfluorobutane sulfonate (PFBS)	ND	0.020	ug/L	0.0082
Perfluorohexane sulfonate (PFHxS)	ND	0.030	ug/L	0.0070

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
13C4 PFOA	113	(50 - 200)
13C4 PFOS	68	(50 - 200)
13C4 PFBA	97	(50 - 200)
13C2 PFHxA	102	(50 - 200)
18O2 PFHxS	111	(50 - 200)
13C5 PFNA	92	(50 - 200)
13C2 PFDA	58	(50 - 200)
13C2 PFUnA	45 *	(50 - 200)
13C2 PFDoA	51	(50 - 200)

NOTE(S) :

* Surrogate recovery is outside stated control limits.

Dalton Utilities

Client Sample ID: #114 1257 SANE RD

HPLC

Lot-Sample #....: D9J030133-002 Work Order #....: LL0DR1AC Matrix.....: WATER
Date Sampled....: 09/29/09 10:42 Date Received...: 10/03/09
Prep Date.....: 10/06/09 Analysis Date...: 10/17/09
Prep Batch #....: 9279461 Analysis Time...: 17:53
Dilution Factor: 1
Method.....: DEN -LC-0012

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>MDL</u>
Perfluorooctane sulfonamide (F OSA)	ND	0.050	ug/L	0.0057

<u>SURROGATE</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>
MeFOA	49 *	(50 - 200)

NOTE(S):

* Surrogate recovery is outside stated control limits.

Dalton Utilities

Client Sample ID: #114 1257 SANE RD

HPLC

Lot-Sample #....: D9J030133-002 Work Order #....: LL0DR2AA Matrix.....: WATER
 Date Sampled....: 09/29/09 10:42 Date Received...: 10/03/09
 Prep Date.....: 10/22/09 Analysis Date...: 11/05/09
 Prep Batch #....: 9295582 Analysis Time...: 13:45
 Dilution Factor: 1

Method.....: DEN -LC-0012

PARAMETER	RESULT	REPORTING		
		LIMIT	UNITS	MDL
Perfluorooctanoic Acid	ND	0.020	ug/L	0.0098
Perfluorooctanesulfonate	ND	0.020	ug/L	0.013
Perfluorobutanoic acid (PFBA)	ND	0.020	ug/L	0.0098
Perfluoropentanoic acid (PFPA)	ND	0.030	ug/L	0.011
Perfluorohexanoic acid (PFHxA)	ND	0.020	ug/L	0.0029
Perfluoroheptanoic acid (PFHpA)	ND	0.020	ug/L	0.013
Perfluorononanoic acid (PFNA)	ND	0.020	ug/L	0.017
Perfluorodecanoic acid (PFDA)	ND	0.020	ug/L	0.0078
Perfluoroundecanoic acid (PFUnA)	ND	0.020	ug/L	0.0069
Perfluorododecanoic acid (PFDoA)	ND	0.020	ug/L	0.015
Perfluorotridecanoic acid (PFTriA)	ND	0.020	ug/L	0.018
Perfluorotetradecanoic acid (PFTeA)	ND	0.020	ug/L	0.015
Perfluorobutane sulfonate (PFBS)	ND	0.020	ug/L	0.0082
Perfluorohexane sulfonate (PFHxS)	ND	0.030	ug/L	0.0070

SURROGATE	PERCENT	RECOVERY
	RECOVERY	LIMITS
13C4 PFOA	152	(50 - 200)
13C4 PFOS	59	(50 - 200)
13C4 PFBA	99	(50 - 200)
13C2 PFHxA	127	(50 - 200)
18O2 PFHxS	79	(50 - 200)
13C5 PFNA	76	(50 - 200)
13C2 PFDA	62	(50 - 200)
13C2 PFUnA	57	(50 - 200)
13C2 PFDoA	49 *	(50 - 200)

NOTE(S):

* Surrogate recovery is outside stated control limits.

Dalton Utilities

Client Sample ID: #114 1257 SANE RD

HPLC

Lot-Sample #....: D9J030133-002 Work Order #....: LL0DR2AC Matrix.....: WATER
Date Sampled....: 09/29/09 10:42 Date Received...: 10/03/09
Prep Date.....: 10/22/09 Analysis Date...: 11/01/09
Prep Batch #....: 9295579 Analysis Time...: 07:31
Dilution Factor: 1
Method.....: DEN -LC-0012

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>MDL</u>
Perfluorooctane sulfonamide (F OSA)	ND	0.050	ug/L	0.0057

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
MeFOSA	53	(50 - 200)

Dalton Utilities

Client Sample ID: DUP #5

HPLC

Lot-Sample #....: D9J030133-003 Work Order #....: LL0D11AA Matrix.....: WATER
 Date Sampled....: 09/29/09 Date Received...: 10/03/09
 Prep Date.....: 10/05/09 Analysis Date...: 10/17/09
 Prep Batch #....: 9278425 Analysis Time...: 04:37
 Dilution Factor: 1
 Method.....: DEN -LC-0012

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perfluorooctanoic Acid	ND	0.020	ug/L	0.0098
Perfluorooctanesulfonate	ND	0.020	ug/L	0.013
Perfluorobutanoic acid (PFBA)	ND	0.020	ug/L	0.0098
Perfluoropentanoic acid (PFPA)	ND	0.030	ug/L	0.011
Perfluorohexanoic acid (PFHxA)	ND	0.020	ug/L	0.0029
Perfluoroheptanoic acid (PFHpA)	ND	0.020	ug/L	0.013
Perfluorononanoic acid (PFNA)	ND	0.020	ug/L	0.017
Perfluorodecanoic acid (PFDA)	ND	0.020	ug/L	0.0078
Perfluoroundecanoic acid (PFUnA)	ND	0.020	ug/L	0.0069
Perfluorododecanoic acid (PFDoA)	ND	0.020	ug/L	0.015
Perfluorotridecanoic acid (PFTriA)	ND	0.020	ug/L	0.018
Perfluorotetradecanoic acid (PFTeA)	ND	0.020	ug/L	0.015
Perfluorobutane sulfonate (PFBS)	ND	0.020	ug/L	0.0082
Perfluorohexane sulfonate (PFHxS)	ND	0.030	ug/L	0.0070

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
13C4 PFOA	112	(50 - 200)
13C4 PFOS	72	(50 - 200)
13C4 PFBA	89	(50 - 200)
13C2 PFHxA	99	(50 - 200)
18O2 PFHxS	105	(50 - 200)
13C5 PFNA	96	(50 - 200)
13C2 PFDA	69	(50 - 200)
13C2 PFUnA	58	(50 - 200)
13C2 PFDoA	63	(50 - 200)

Dalton Utilities

Client Sample ID: DUP #5

HPLC

Lot-Sample #...: D9J030133-003 Work Order #...: LL0D11AC Matrix.....: WATER
 Date Sampled...: 09/29/09 Date Received...: 10/03/09
 Prep Date.....: 10/06/09 Analysis Date...: 10/17/09
 Prep Batch #...: 9279461 Analysis Time...: 18:00
 Dilution Factor: 1
 Method.....: DEN -LC-0012

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING</u> <u>LIMIT</u>	<u>UNITS</u>	<u>MDL</u>
Perfluorooctane sulfonamide (F OSA)	ND	0.050	ug/L	0.0057

<u>SURROGATE</u>	<u>PERCENT</u> <u>RECOVERY</u>	<u>RECOVERY</u> <u>LIMITS</u>
MeFOSA	57	(50 - 200)

Dalton Utilities

Client Sample ID: DUP #5

HPLC

Lot-Sample #....: D9J030133-003 Work Order #....: LL0D12AC Matrix.....: WATER
 Date Sampled....: 09/29/09 Date Received...: 10/03/09
 Prep Date.....: 10/22/09 Analysis Date...: 11/01/09
 Prep Batch #....: 9295579 Analysis Time...: 07:37
 Dilution Factor: 1
 Method.....: DEN -LC-0012

<u>PARAMETER</u>	<u>RESULT</u>	<u>REPORTING LIMIT</u>	<u>UNITS</u>	<u>MDL</u>
Perfluorooctane sulfonamide (F OSA)	ND	0.050	ug/L	0.0057

<u>SURROGATE</u>	<u>PERCENT RECOVERY</u>	<u>RECOVERY LIMITS</u>
MeFOSA	56	(50 - 200)

Dalton Utilities

Client Sample ID: DUP #6

HPLC

Lot-Sample #....: D9J030133-004 Work Order #....: LL0D31AA Matrix.....: WATER
 Date Sampled....: 09/29/09 Date Received...: 10/03/09
 Prep Date.....: 10/05/09 Analysis Date...: 10/17/09
 Prep Batch #....: 9278425 Analysis Time...: 04:53
 Dilution Factor: 1
 Method.....: DEN -LC-0012

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perfluorooctanoic Acid	ND	0.020	ug/L	0.0098
Perfluorooctanesulfonate	ND	0.020	ug/L	0.013
Perfluorobutanoic acid (PFBA)	ND	0.020	ug/L	0.0098
Perfluoropentanoic acid (PFPA)	ND	0.030	ug/L	0.011
Perfluorohexanoic acid (PFHxA)	ND	0.020	ug/L	0.0029
Perfluoroheptanoic acid (PFHpA)	ND	0.020	ug/L	0.013
)				
Perfluorononanoic acid (PFNA)	ND	0.020	ug/L	0.017
Perfluorodecanoic acid (PFDA)	ND	0.020	ug/L	0.0078
Perfluoroundecanoic acid (PFUnA)	ND	0.020	ug/L	0.0069
A)				
Perfluorododecanoic acid (PFDoA)	ND	0.020	ug/L	0.015
A)				
Perfluorotridecanoic acid (PFTriA)	ND	0.020	ug/L	0.018
Perfluorotetradecanoic acid (PFTeA)	ND	0.020	ug/L	0.015
Perfluorobutane sulfonate (PFBS)	ND	0.020	ug/L	0.0082
Perfluorohexane sulfonate (PFHxS)	ND	0.030	ug/L	0.0070

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
13C4 PFOA	106	(50 - 200)
13C4 PFOS	64	(50 - 200)
13C4 PFBA	92	(50 - 200)
13C2 PFHxA	99	(50 - 200)
18O2 PFHxS	107	(50 - 200)
13C5 PFNA	93	(50 - 200)
13C2 PFDA	58	(50 - 200)
13C2 PFUnA	47 *	(50 - 200)
13C2 PFDoA	53	(50 - 200)

NOTE(S):

* Surrogate recovery is outside stated control limits.

Dalton Utilities

Client Sample ID: DUP #6

HPLC

Lot-Sample #....: D9J030133-004 Work Order #....: LL0D31AC Matrix.....: WATER
 Date Sampled....: 09/29/09 Date Received...: 10/03/09
 Prep Date.....: 10/06/09 Analysis Date...: 10/17/09
 Prep Batch #....: 9279461 Analysis Time...: 18:07
 Dilution Factor: 1

Method.....: DEN -LC-0012

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perfluorooctane sulfonamide (F OSA)	ND	0.050	ug/L	0.0057

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
MeFOSA	37 *	(50 - 200)

NOTE(S) :

* Surrogate recovery is outside stated control limits.

Dalton Utilities

Client Sample ID: DUP #6

HPLC

Lot-Sample #....: D9J030133-004 Work Order #....: LL0D32AA Matrix.....: WATER
 Date Sampled....: 09/29/09 Date Received...: 10/03/09
 Prep Date.....: 10/22/09 Analysis Date...: 11/05/09
 Prep Batch #....: 9295582 Analysis Time...: 13:56
 Dilution Factor: 1
 Method.....: DEN -LC-0012

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perfluorooctanoic Acid	ND	0.020	ug/L	0.0098
Perfluorooctanesulfonate	ND	0.020	ug/L	0.013
Perfluorobutanoic acid (PFBA)	ND	0.020	ug/L	0.0098
Perfluoropentanoic acid (PFPA)	ND	0.030	ug/L	0.011
Perfluorohexanoic acid (PFHxA)	ND	0.020	ug/L	0.0029
Perfluoroheptanoic acid (PFHpA)	ND	0.020	ug/L	0.013
)				
Perfluorononanoic acid (PFNA)	ND	0.020	ug/L	0.017
Perfluorodecanoic acid (PFDA)	ND	0.020	ug/L	0.0078
Perfluoroundecanoic acid (PFUnA)	ND	0.020	ug/L	0.0069
A)				
Perfluorododecanoic acid (PFDoA)	ND	0.020	ug/L	0.015
A)				
Perfluorotridecanoic acid (PFTriA)	ND	0.020	ug/L	0.018
Perfluorotetradecanoic acid (PFTeA)	ND	0.020	ug/L	0.015
Perfluorobutane sulfonate (PFBS)	ND	0.020	ug/L	0.0082
Perfluorohexane sulfonate (PFHxS)	ND	0.030	ug/L	0.0070

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
13C4 PFOA	148	(50 - 200)
13C4 PFOS	58	(50 - 200)
13C4 PFBA	95	(50 - 200)
13C2 PFHxA	124	(50 - 200)
18O2 PFHxS	77	(50 - 200)
13C5 PFNA	79	(50 - 200)
13C2 PFDA	64	(50 - 200)
13C2 PFUnA	59	(50 - 200)
13C2 PFDoA	55	(50 - 200)

Dalton Utilities

Client Sample ID: DUP #6

HPLC

Lot-Sample #....: D9J030133-004 Work Order #....: LL0D32AC Matrix.....: WATER
 Date Sampled....: 09/29/09 Date Received...: 10/03/09
 Prep Date.....: 10/22/09 Analysis Date...: 11/01/09
 Prep Batch #....: 9295579 Analysis Time...: 07:42
 Dilution Factor: 1
 Method.....: DEN -LC-0012

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perfluorooctane sulfonamide (F OSA)	ND	0.050	ug/L	0.0057

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
MeFOSA	50	(50 - 200)